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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

THANH, QUANG D

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 05/05/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,050

Applicant(s)

RHODES ET AL.

Examiner

Quang D. Thanh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujimoto et al. (5,611,772). Fujimoto discloses a massage method comprising the steps of : providing a body support system including more than one expandable chamber 18a-18h (fig. 2), a pressure/exhaust system (intake/exhaust instrument 20), a controller (operation panel 21 and control circuit 100, fig. 5) configured to operate the pressure/exhaust system according to multiple selectable predetermined control index sequences (3 sequences for the back, waist and whole body as shown in figs. 7-9); selecting a massage sequence by selecting one of the control index sequences (switch 23a is used to select any one of the 3 sequences for the back, waist and whole body, fig. 4, col. 4, lines 58-60) causing the controller to alternately provide fluid communication between the selected chambers and the pressure system to produce inflow of fluid, and produce an outflow of fluid from each of the selected chambers by operating the exhaust system (fig. 7 shows one sequence including 18a,18b and 18c, col. 8, lines 10-56); and selecting massage intensity by allowing pressure within the selected chambers to increase only until a selected variable target pressure is reached

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(fig. 7 shows inflation of each chamber corresponding to a certain amount of time , therefore inherently teaches a pre-selected target pressure).

3. Re claims 5 and 9, Fujimoto discloses (claim 5) the step of providing a user initiated switch 23a, a range of desired massage index sequences (3 sequences for the back, waist and whole body as shown in figs. 7-9) , and operating the switch 23a to select one of the desired massage index sequences (fig. 4, col. 4, lines 58-60); (claim 9) providing the chambers as a series of zones (in this case, each chamber is considered as a zone and the selected chambers 18a, 18b, 18c are collectively viewed as a series of zones) , and the step of selecting a massage sequence includes selecting a massage index sequence that first inflates each of the zones in a series fashion then deflates each of the zones in a reverse series fashion (fig. 7, col. 8, lines 21-26).

4. Claims 1, 5-8, 15, 17-18, 20, 22, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Gillen et al. (5,211,162).

5. Re claims 1 and 20, Gillen discloses a massage method comprising the steps of : providing a body support system including more than one expandable chamber 51A-58A , a pressure/exhaust system 15 with pressure pump 17 and exhaust valve 21V-28V, a controller 30 (fig. 3) configured to operate the pressure/exhaust system according to multiple selectable predetermined control index sequences (3 sequences including single, double and triple-chambers as shown in figs. 9-11), selecting a massage sequence by selecting one of the control index sequences (buttons of keypad 31 is pressed in menu 2 to select any one of the sequences for the single, double and

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triple-chambers , figs. 9-11, col. 9, lines 7-11) causing the controller to alternately provide fluid communication between the selected chambers and the pressure system to produce inflow of fluid via inlet port, and produce an outflow of fluid from each of the selected chambers by operating the exhaust system via exhaust port (col. 9, line 54 to col. 10, line 33, fig. 9); and selecting massage intensity by allowing pressure within the selected chambers to increase only until a selected variable target pressure is reached (via knob 14A, col. 9, lines 23-27).

6. Re claims 5-8, and 24, Gillen discloses (claims 5 and 24) the step of providing a user initiated switch (keypad 31, fig. 3), a range of desired massage index sequences (3 sequences including single, double and triple-chambers as shown in figs. 9-11, and operating the switch to select one of the desired massage index sequences (buttons of keypad 31 is pressed in menu 2 to select any one of the sequences for the single, double and triple-chambers , figs. 9-11, col. 9, lines 7-11);(claim 6) providing more expandable chambers in a back and seat support (fig. 1); (claim 7) operating (knob 14A) the pressure system to equalize the pressure between predetermined ones (col. 9, lines 23-27); (claim 8) providing a pressure sensor 20, multiple valves 21V-28V and a pump 17, a micro-controller 33 (col. 6, lines 12-14) responding to the pressure sensor 20 to initially inflate the chambers with all the valves initially opening prior to cyclically connecting each chamber to the pressure source (col. 6, lines 23-32).

7. Re claims 15,17-18, 22, Gillen discloses (claim 15) the step of selecting massage intensity includes selecting a massage index sequence that achieves a selected variable target pressure within each selected chamber by scaling inflation time (fig. 9

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shows scaling time of 6 seconds for each chamber); (claim 17) the step of selecting message sequence and message intensity are accomplished by selecting a single message control index sequence (fig. 9); (claims 18 and 22) providing an exhaust system (exhaust port of solenoid valve 21V) configured to actively evacuate air from the chamber (fig. 3).

8.

9. Claims 1, 16, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Cone et al. (5,591,200). Re claims 1 and 20, Cone discloses a massage method comprising the steps of : providing a body support system including more than one expandable chamber 52/56 , a pressure/exhaust system 10 with pressure supply valve 90 and exhaust valve 104 , a controller 116 (fig. 5) configured to operate the pressure/exhaust system according to multiple selectable predetermined control index sequences (fig. 7 shows a wide variety sequences such as group, auto gradient, and wave), selecting a message sequence by selecting one of the control index sequences (fig. 7, block 152 allows the operator to select different sequences such as group, auto gradient, and wave) causing the controller to alternately provide fluid communication between the selected chambers and the pressure system to produce inflow of fluid, and produce an outflow of fluid from each of the selected chambers by operating the exhaust system (col. 9, lines 45-55); and selecting message intensity by allowing pressure within the selected chambers to increase only until a selected variable target pressure is reached (maximum allowed system pressure , col. 10, lines 26-28); and (claim 16) a pressure sensor 102 (fig. 4, col. 8, lines 9-19).

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Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-3, 12-14, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen in view of Gray et al. (6,159,172).

Re claims 2 and 21, Gillen discloses the step of providing a source of pressurized fluid (pump 17) , supply/exhaust valves 21V-28V; except that these valves are three-way solenoid valves with inlet, discharge and exhaust ports. However, Gray teaches an orthopedic seat with inflatable cells 18/20, and each cell has a separate inlet valve 42 and an exhaust valve 44 (fig. 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to substitute Gillen's three-way solenoid valve with two separate inlet valve and exhaust valve for each expandable chamber, as suggested by Gray, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Furthermore, applicant's own admission on p. 10, lines 5-6 that " if desired, the supply valves 26 and exhaust valves 34 can be solenoid operated valves" appears to be non-critical with respect to the valve design choice, therefore absent a teaching as to criticality that each cell having a separate supply valve and an exhaust valve, this particular arrangement is deemed to have been known by those skilled in the art since

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the instant specification and evidence of record fail to attribute any significance (novel or unexpected results) to a particular arrangement. In re Kuhle, 526 F.2d 553,555,188 USPQ 7, 9 (CCPA 1975).

12. Re claim 3, Gillen discloses a common exhaust provided with a relief valve 14 (fig. 3, col. 5, lines 61-64); providing fluid communication 18 between the expandable chambers and the common exhaust; and opening the common exhaust in accordance with the massage index sequence (col. 5, lines 44-64).

13. Re claims 12 and 14, Gillen/Gray discloses the claimed invention except that it does not explicitly reveal various sequencing of the inflation and deflation of the chambers as claimed. However, Gillen teaches that if a single chamber option is elected, each of chambers 51A-58A is inflated sequentially. Moreover, Gillen also teaches that if double or triple-chamber option is elected, the chambers are sequentially inflated in a staggered manner (col. 9, lines 11-17), and thus producing overlapping sequencing inflation and deflation (col. 11, lines 18-58). Gillen's Fig. 10 illustrates an example of inflating the first cell 51A between 0-6 seconds and equalizing first 51A and second 52A cells between 3-6 seconds, deflating the first cell after 6 second (col. 10, lines 34-68). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to include various alternatives sequential inflation and deflation in operation of the Gillen/Gray's device, as suggested by Gillen, for the purpose of providing a wide variety desirable massaging types in which the user's back can be massaged in a particular sequence that would suit the user's need. Given the

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inherent structural features that have been demonstrated in the art, such as the microprocessor controller capable of producing a wide variety desirable sequences, it is well within the knowledge of a skilled artisan to be capable of using the prior art's device to provide various alternatives sequential inflation and deflation as claimed by the present invention.

14. Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen/Gray in view of Takeuchi (4,622,706). Gillen/Gray discloses the claimed invention except for an exhaust pump. However, Takeuchi teaches an air mat apparatus comprising a changeover valve 2 and air discharge pump 9 for deflating forcibly the air tube (col. 5, lines 31-38). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to include an exhaust pump in the Gillen/Gray's device, as suggested by Takeuchi, in order to forcibly and quickly discharge the air out of the air bags when needed (col. 5, lines 31-38).

15. Claims 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen. Gillen teaches that if a single chamber option is elected, each of chambers 51A-58A is inflated sequentially. Moreover, Gillen also teaches that if double or triple-chamber option is elected, the chambers are sequentially inflated in a staggered manner (col. 9, lines 11-17), and thus producing overlapping sequencing inflation and deflation (col. 11, lines 18-58). Therefore, it would have been obvious to one of ordinary

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skill in the art at the time of invention was made to include various alternatives sequential inflation and deflation in operation of the device as claimed, for the purpose of providing desirable manner in which the user's back can be massaged in a particular sequence that would suit the user's need.

16. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen view of Takeuchi (4,622,706). Gillen discloses the claimed invention except for an exhaust pump. However, Takeuchi teaches an air mat apparatus comprising a changeover valve 2 and air discharge pump 9 for deflating forcibly the air tube (col. 5, lines 31-38). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to include an exhaust pump in the Gillen's device, as suggested by Takeuchi, in order to forcibly and quickly discharge the air out of the air bags when needed (col. 5, lines 31-38).

Response to Arguments

17. Applicant's arguments filed 02/19/2004 have been fully considered but they are not persuasive.

18. Applicant's arguments with respect to the reference of Fujimoto re claims 1,5 and 9 have been considered but are moot in view of the new ground(s) of rejection. Please see explanation above.

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19. Applicant's arguments with respect to the reference of Gillen re claims 1,5-8 have been considered but are moot in view of the new ground(s) of rejection. Please see explanation above.

20. In response to applicant's argument re claims 10-14 that there is no obviousness taught or suggested in the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, since the applicants fails to show any criticality produced by the claimed sequences of the instant application, therefore absent a teaching as to criticality that the chambers are inflated and deflated according the claimed sequence, this particular arrangement is deemed to have been known by those skilled in the art since the instant specification and evidence of record fail to attribute any significance (novel or unexpected results) to a particular arrangement. In re Kuhle, 526 F.2d 553,555,188 USPQ 7, 9 (CCPA 1975). One purpose of the instant invention, mentioned by the applicant in p. 4, lines 19-29, is to provide more concentrated massage, particularly a concentrated pulse type of massage action, which is also provided by prior art of record.

21. In response to applicant's request of providing a more complete reasoned analysis supporting this obviousness determination, the examiner maintains that, since Gillen already teaches that the chambers can be sequentially inflated in a staggered

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manner (col. 9, lines 11-17), and thus producing overlapping sequencing inflation and deflation (col. 11, lines 18-58), and given the inherent structural features that have been demonstrated in the art, such as the microprocessor controller capable of producing a wide variety desirable sequences, and absent a teaching to show any criticality produced by the applicant's claimed sequences of the instant application, there appears to be no unobviousness for a skilled artisan to be capable of using the prior art's device to provide various alternatives sequential inflation and deflation as claimed by the present invention.

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D. Thanh whose telephone number is (703) 605-4354. The examiner can normally be reached on Monday-Thursday & alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Lucchesi can be reached on (703) 308-2698. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Quang D. Thanh
Patent Examiner
Art Unit 3764
April 24, 2004

QT


NICHOLAS D. LUCCHESI
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